Amendments to Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (Original) An isolated nucleic acid fragment encoding a soybean *myo*-inositol 1-phosphate synthase.

Claim 2 (Original) The nucleic acid fragment of Claim 1 wherein the nucleotide sequence encoding the soybean *myo*-inositol 1-phosphate synthase is substantially similar to the nucleotide sequence set forth in a member selected from the group consisting of SEQ ID NO:1 and SEQ ID NO:15.

Claim 3 (Original) The nucleic acid fragment of Claim 1 wherein the nucleotide sequence encoding the soybean *myo*-inositol 1-phosphate synthase encodes the amino acid sequence set forth in a member selected from the group consisting SEQ ID NO:2 and SEQ ID NO:16.

Claim 4 (Original) The nucleic acid fragment of Claim 1 wherein the nucleotide sequence encoding the soybean *myo*-inositol 1-phosphate synthase is set forth in a member selected from the group consisting SEQ ID NO:1 and SEQ ID NO:15.

Claim 5 (Original) A chimeric gene comprising the nucleic acid fragment of Claim 1 or the complement of the nucleic acid fragment of Claim 1, operably linked to suitable regulatory sequences.

Claim 6 (Original) A chimeric gene comprising a subfragment of the nucleic acid fragment of Claim 1 or the complement of a subfragment of the nucleic acid fragment of Claim 1, operably linked to suitable regulatory sequences, wherein expression of the chimeric gene results in a decrease in expression of an endogenous or native gene encoding a soybean *myo*-inositol 1-phosphate synthase.

Claim 7 (Original) An isolated nucleic acid fragment encoding a mutant *myo*-inositol 1-phosphate synthase having decreased capacity for the synthesis of *myo*-inositol-1-phospate.

Claim 8 (Original) The nucleic acid fragment of Claim 7 wherein the nucleotide sequence encoding the nutant *myo*-inositol 1-phosphate synthase is substantially similar to the nucleotide sequence set forth in a member selected from the group consisting SEQ ID NO:5 and SEQ ID NO:11.

Claim 9 (Original) The nucleic acid fragment of Claim 7 wherein the nucleotide sequence encoding the mutant *myo*-inositol 1-phosphate synthase encodes the amino acid sequence set forth in a member selected from the group consisting SEQ ID NO:6 and SEQ ID NO:12.

Claim 10 (Original) The nucleic acid fragment of Claim 7 wherein the nucleotide sequence encoding the mutant *myo*-inositol 1-phosphate synthase is set forth in a member selected from the group consisting SEQ ID NO:5 and SEQ ID NO:11.

Claim 11-19 (Canceled)

Claim 20 (Original) A soybean plant comprising the chimeric gene of Claim 5 or Claim 6 wherein the soybean plant has a heritable phenotype of (i) a seed phytic acid content less than 17 μmol/g, (ii) a seed content of raffinose plus stachyose of less than 14.5 μmol/g, and (iii) a seed sucrose content of greater than 200 μmol/g.

Claim 21 (Original) Seeds of the soybean plants of Claim 20.

Claim 22-23 (Canceled)

Claim 24 (Original) A method for making a soybean plant with a heritable phenotype of (i) a seed phytic acid content less than 17 μmol/g, (ii) a seed content of raffinose plus stachyose of less than 14.5 μmol/g, and (iii) a seed sucrose content of greater than 200 μmol/g, the method comprising:

(a) crossing the soybean plant of Claim 20 with an elite soybean plant; and

(b) selecting progeny plant of the cross of step (a) that has a heritable phenotype of (i) a seed phytic acid content less than 17 μmol/g, (ii) a seed content of raffinose plus stachyose of less than 14.5 μmol/g, and (iii) a seed sucrose content of greater than 200 μmol/g.

Claim 25 (Original) Seeds of the soybean plant made by the method of Claim 24.

Claim 26 (Original) A soy protein product derived from seeds of a soybean plant homozygous for at least one gene encoding a mutant *myo*-inositol 1-phosphate synthase having decreased capacity for the synthesis of *myo*-inositol 1-phosphate, the gene conferring a heritable phenotype of (i) a seed phytic acid content less than 17 μmol/g, (ii) a seed content of raffinose plus stachyose of less than 14.5 μmol/g, and (iii) a seed sucrose content of greater than 200 μmol/g.

Claim 27 (Canceled)

Claim 28 (Original) A soy protein product derived from the processing of soybean seeds of Claim 21.

Claim 29 (Canceled)

Claim 30 (Original) A soy protein product derived from the processing of soybean seeds of Claim 25.

Claim 31 (Canceled)

Claim 32 (Original) A method for producing a soy protein product derived from seeds of a soybean plant with a heritable phenotype of (i) a seed phytic acid content less than 17 μmol/g, (ii) a seed content of raffinose plus stachyose of less than 14.5 μmol/g, and (iii) a seed sucrose content of greater than 200 μmol/g comprising:

(a) crossing an agronomically elite soybean plant with the soybean plant of Claim 20;

(b) screening the seed of progeny plants obtained from step (a) for (i) a seed phytic acid content less than 17 μmol/g, (ii) a seed content of

raffinose plus stachyose of less than 14.5 μmol/g, and (iii) a seed sucrose content of greater than 200 μmol/g; and

(c) processing the seed selected in step (b) to obtain the desired soybean protein product.

Claim 33 (Original) A method of using a soybean plant homozygous for at least one gene encoding a mutant *myo*-inositol 1-phosphate synthase having decreased capacity for the synthesis of *myo*-inositol 1-phosphate, the gene conferring a heritable phenotype of (i) a seed phytic acid content less than 17 μmol/g, (ii) a seed content of raffinose plus stachyose of less than 14.5 μmol/g, and (iii) a seed sucrose content of greater than 200 μmol/g to produce progeny lines, the method comprising:

(a) crossing a soybean plant comprising a mutant *myo*-inositol 1-phosphate synthase having decreased capacity for the synthesis of *myo*-inositol 1-phosphate with any soybean parent which does not comprise the mutation, to yield a F1 hybrid;

(b) selfing the F1 hybrid for at least one generation; and

(c) identifying the progeny of step (b) homozygous for at least one gene encoding a mutant *myo*-inositol 1-phosphate synthase having decreased capacity for the synthesis of *myo*-inositol 1-phosphate, the gene conferring a heritable phenotype of (i) a seed phytic acid content less than 17 μmol/g, (ii) a seed content of raffinose plus stachyose of less than 14.5 μmol/g, and (iii) a seed sucrose content of greater than 200 μmol/g.